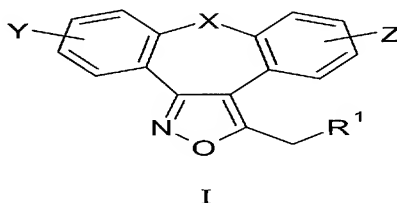


# **AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A compound of formula I:



wherein

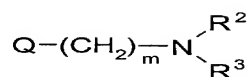
~~X means is selected from the group consisting of CH<sub>2</sub> or a heteroatom selected from a group consisting of CH<sub>2</sub>O, S, S(=O), S(=O)<sub>2</sub> and NR<sup>a</sup>, wherein R<sup>a</sup> is selected from the group consisting of hydrogen, or a substituent selected from the group consisting of C<sub>1</sub>-C<sub>3</sub>-alkyl, C<sub>1</sub>-C<sub>3</sub>-alkanoyl, C<sub>1</sub>-C<sub>7</sub>-alkoxycarbonyl, C<sub>7</sub>-C<sub>10</sub>-arylmethoxycarbonyl, C<sub>7</sub>-C<sub>10</sub>-aroyl, C<sub>7</sub>-C<sub>10</sub>-arylalkyl, C<sub>3</sub>-C<sub>7</sub>-alkylsilyl and C<sub>5</sub>-C<sub>10</sub>-alkylsilylalkoxyalkyl;~~

~~Y and Z are each independently from each other mean one or more identical or different substituents linked to any available carbon atom selected from the group consisting of hydrogen, halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>2</sub>-C<sub>4</sub>-alkenyl, C<sub>2</sub>-C<sub>4</sub>-alkynyl, halo-C<sub>1</sub>-C<sub>4</sub>-alkyl, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, trifluoromethoxy, C<sub>1</sub>-C<sub>4</sub>-alkanoyl, amino, amino-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkylamino, N-(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl, carboxy, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl, cyano and nitro;~~

~~R<sup>1</sup> means is selected from the group consisting of hydrogen, halogen, optionally substituted C<sub>1</sub>-C<sub>7</sub>-alkyl optionally substituted with one, two, three or more substituents selected from the group consisting of halogen atom, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl and C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl; C<sub>2</sub>-C<sub>7</sub>-alkenyl optionally substituted with one, two, three or more halogen atoms; C<sub>2</sub>-C<sub>7</sub>-alkynyl, alkynyl; monocyclic or bicyclic aryl group having from 6 to 10 carbon atoms and~~

~~altering double bond and said group can be optionally substituted with one or two substituents selected from the group consisting of fluoro, chloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>)-alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl and can be linked to the rest of the molecule by any available carbon atom via direct bond or via C<sub>1</sub>-C<sub>4</sub>-alkylene group; monocyclic or bicyclic heteroaryl having the meaning of aromatic and partially aromatic groups of a monocyclic or bicyclic ring with 4 to 12 carbon atoms and at least one of them being heteroatom selected from the group consisting of O, S and N wherein available carbon or nitrogen represent the binding site of the group to the rest of the molecule either via direct bond or via C<sub>1</sub>-C<sub>4</sub>-alkylene group and where said heteroaryl can be optionally substituted with fluoro, chloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>)-alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl; five-member or six-member fully saturated or partly unsaturated heterocycle group containing at least one hetero atom selected from the group consisting of O, S and N wherein available carbon or nitrogen represent the binding site of the group to the rest of the molecule either via direct bond or via C<sub>1</sub>-C<sub>4</sub>-alkylene group and where said heterocycle can be optionally substituted with fluoro, chloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>)-alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl; hydroxy; hydroxy-C<sub>2</sub>-C<sub>7</sub>-alkenyl; hydroxy-C<sub>2</sub>-C<sub>7</sub>-alkynyl alkynyl; C<sub>1</sub>-C<sub>7</sub>-alkoxy; thiol; thio-C<sub>2</sub>-C<sub>7</sub>-alkenyl; thio-C<sub>2</sub>-C<sub>7</sub>-alkynyl alkynyl; C<sub>1</sub>-C<sub>7</sub>-alkylthio; amino; N-(C<sub>1</sub>-C<sub>7</sub>-alkyl)amino; N,N-di(C<sub>1</sub>-C<sub>7</sub>-alkyl)amino; C<sub>1</sub>-C<sub>7</sub>-alkylamino; amino-C<sub>2</sub>-C<sub>7</sub>-alkenyl; amino-C<sub>2</sub>-C<sub>7</sub>-alkynyl alkynyl; amino-C<sub>1</sub>-C<sub>7</sub>-alkoxy; C<sub>1</sub>-C<sub>7</sub>-alkanoyl; C<sub>7</sub>-C<sub>10</sub>-aryl; oxo-C<sub>1</sub>-C<sub>7</sub>-alkyl; C<sub>1</sub>-C<sub>7</sub>-alkanoyloxy; carboxy; an optionally substituted C<sub>1</sub>-C<sub>7</sub>-alkyloxycarbonyl; an optionally substituted C<sub>7</sub>-C<sub>10</sub>-aryloxycarbonyl; carbamoyl; N-(C<sub>1</sub>-C<sub>7</sub>-alkyl)carbamoyl; N,N-di(C<sub>1</sub>-C<sub>7</sub>-alkyl)carbamoyl; cyano; cyano-C<sub>1</sub>-C<sub>7</sub>-alkyl; sulfonyl; C<sub>1</sub>-C<sub>7</sub>-alkylsulfonyl; sulfinyl; C<sub>1</sub>-C<sub>7</sub>-alkylsulfinyl; nitro;~~

~~or a substituent represented with of the formula II:~~



II

wherein

~~R<sup>2</sup> and R<sup>3</sup> simultaneously or are each~~ independently from each other have the meaning of hydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or aryl ~~have the meaning as~~ as defined above or,

~~R<sup>2</sup> and R<sup>3</sup> taken together with the nitrogen atom to which they are attached form an N have the meaning of~~ optionally substituted heterocycle or heteroaryl wherein heterocycle relates to five membered or six membered fully saturated or partly unsaturated heterocycle group containing at least one hetero atom selected from the group consisting of O, S and N and where said heterocycle which can be optionally substituted with one or two substituents ~~which are selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl, and C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl and heteroaryl relates to aromatic and partially aromatic groups of a monocyclic or bicyclic ring with 4 to 12 carbon atoms and at least one of them being heteroatom selected from the group consisting of O, S and N and where said heteroaryl can be optionally substituted with one or two substituents which are selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl; or~~

a monocyclic or bicyclic aryl group; a monocyclic or bicyclic heteroaryl group; and a heterocycle, wherein the monocyclic or bicyclic aryl group, the monocyclic or bicyclic heteroaryl group and the heterocycle are linked to the thiophene ring via a direct bond or a C<sub>1</sub>-C<sub>4</sub> alkylene group, and are each optionally substituted with one or more substituents selected from the group consisting of fluoro, chloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl and C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl;

~~m has the meaning of is~~ an integer from 1 to 3;

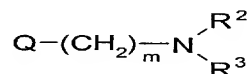
~~Q has the meaning of~~ is oxygen, sulfur or nitrogen;  
and pharmaceutically acceptable salts and solvates thereof.

2. (Currently Amended) A compound according to claim 1 wherein X ~~represents~~ is O or S.

3. (Currently Amended) A compound according to claim 1 wherein Y and Z are each ~~independently from each other mean one or more identical or different substituents linked to any available carbon atom selected from the group consisting of~~ hydrogen, fluorine, chlorine, bromine, C<sub>1</sub>-C<sub>4</sub>-alkyl, halo-C<sub>1</sub>-C<sub>4</sub>-alkyl, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, trifluoromethoxy, C<sub>1</sub>-C<sub>4</sub>-alkanoyl, amino, amino-C<sub>1</sub>-C<sub>4</sub>-alkyl, *N*-(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, *N,N*-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, cyano and nitro.

4. (Currently Amended) A compound according to claim 1 wherein:  
~~R<sup>1</sup> has the maning of~~ is selected from the group consisting of hydrogen, halogen, C<sub>1</sub>-C<sub>7</sub>-alkyl optionally substituted with one, ~~two, three~~ or more substituents selected from the group consisting of halogen atom, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, *N*-(C<sub>1</sub>-C<sub>4</sub>) alkylamino and *N,N*-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino; ~~monocyclic or bicyclic aryl group having from 6 to 10 carbon atoms and altering double bond and said group can be optionally substituted with one or two substituents selected from the group consisting of fluoro, ehloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, *N*-(C<sub>1</sub>-C<sub>4</sub>) alkylamino and *N,N*-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino and can be linked to the rest of the molecule by any available carbon atom via direct bond or via C<sub>1</sub>-C<sub>4</sub> alkylene group; monocyclic or bicyclic heteroaryl having the meaning of aromatic and partially aromatic groups of a monocyclic or bicyclic ring with 4 to 12 carbon atoms and at least one of them being heteroatom selected from the group consisting of O, S and N wherein available carbon or nitrogen represent the binding site of the group to the rest of the molecule either via direct bond or via C<sub>1</sub>-C<sub>4</sub> alkylene group and where said heteroaryl can be optionally substituted with fluoro, ehloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, *N*-(C<sub>1</sub>-C<sub>4</sub>) alkylamino and *N,N*-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino; five member or six member fully saturated or partly unsaturated heterocycle group containing at least one hetero atom selected from the group~~

consisting of O, S and N wherein available carbon or nitrogen represent the binding site of the group to the rest of the molecule either via direct bond or via C<sub>1</sub>-C<sub>4</sub> alkylene group and where said heterocycle can be optionally substituted with fluoro, chloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino and N,N-di(C<sub>1</sub>-C<sub>4</sub> alkyl) amine; hydroxy; C<sub>1</sub>-C<sub>7</sub>-alkoxy; thiol; C<sub>1</sub>-C<sub>7</sub>-alkylthio; amino; N-(C<sub>1</sub>-C<sub>7</sub>-alkyl)amino; N,N-di(C<sub>1</sub>-C<sub>7</sub>-alkyl)amino; amino-C<sub>1</sub>-C<sub>7</sub>-alkoxy; C<sub>1</sub>-C<sub>7</sub>-alkanoyl; C<sub>7</sub>-C<sub>10</sub>-aroyl; C<sub>1</sub>-C<sub>7</sub>-alkanoyloxy; an optionally substituted C<sub>1</sub>-C<sub>7</sub>-alkyloxycarbonyl; an optionally substituted C<sub>7</sub>-C<sub>10</sub>-aryloxycarbonyl; carbamoyl; N-(C<sub>1</sub>-C<sub>7</sub>-alkyl)carbamoyl; N,N-di(C<sub>1</sub>-C<sub>7</sub>-alkyl)carbamoyl; cyano; cyano-C<sub>1</sub>-C<sub>7</sub>-alkyl; nitro; or a substituent represented with of the formula II:



II

wherein

R<sup>2</sup> and R<sup>3</sup> ~~simultaneously or are each~~ independently from each other have the meaning of hydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl, aryl have the meaning as described above; or

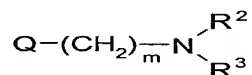
R<sup>2</sup> and R<sup>3</sup> taken together with the nitrogen atom to which they are attached form a N have the meaning of heterocycle or heteroaryl selected from the group consisting of morpholine-4-yl, piperidine-1-yl, pyrrolidine-1-yl, imidazole-1-yl and piperazine-1-yl; or monocyclic or bicyclic aryl group; monocyclic or bicyclic heteroaryl group; and a heterocycle, wherein the monocyclic or bicyclic aryl group, the monocyclic or bicyclic heteroaryl group and the heterocycle are linked to the thiophene ring via a direct bond or a C1-C4 alkylene group, and are each optionally substituted with one or more substituents selected from the group consisting of fluoro, chloro, C1-C4 alkyl, cyano, nitro, hydroxy, C1-C4 alkoxy, thiol, C1-C4 alkylthio, amino, N-(C 1-C4) alkylamino, and N,N-di(C1-C4-alkyl)-amino; and

m— has the meaning of an integer from 1 to 3;

Q has the meaning of is oxygen.

5. (Currently Amended) A compound according to claim 1 ~~claims 1 or 3~~ wherein Y ~~represents is~~ hydrogen or chlorine and Z represents hydrogen.

6. (Currently Amended) A compound according to claim 1 ~~claims 1 or 4~~ wherein R<sup>1</sup> ~~represents is~~ CH<sub>3</sub>, CH<sub>2</sub>Br, CH<sub>2</sub>OH or a substituent of formula II:



II

wherein R<sup>2</sup>, R<sup>3</sup>, Q and m have the above defined meaning.

7. (Currently Amended) A compound according to claim 6 wherein ~~symbol m has the meaning of is~~ 2 or 3.

8. (Currently Amended) A compound according to claim 1 selected from the group consisting of:

3-methyl-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;

11-chloro-3-methyl-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;

3-methyl-2,8-dioxa-1-aza-dibenzo[*e,h*]azulene;

3-bromomethyl-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;

3-bromomethyl-11-chloro-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;

3-bromomethyl-2,8-dioxa-1-aza-dibenzo[*e,h*]azulene;

dimethyl-[2-(2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-ethyl]-amine;

dimethyl-[3-(2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-propyl]-amine;

dimethyl-[2-(11-chloro-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-ethyl]-

amine;

dimethyl-[3-(11-chloro-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-

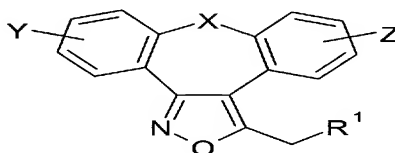
propyl]-amine;

dimethyl-[2-(2,8-dioxa-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-ethyl]-amine; and

dimethyl-[3-(2,8-dioxa-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-propyl]-amine,

or a pharmaceutacaly acceptable salt or solvate thereof.

9. (Currently Amended) Process for the preparation of the compound of the formula I:



I

wherein

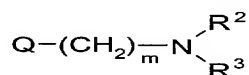
X means is selected from the group consisting of CH<sub>2</sub> or a heteroatom selected from a group consisting of CH<sub>2</sub>, O, S, S(=O), S(=O)<sub>2</sub> and NR<sup>a</sup>, wherein R<sup>a</sup> is selected from the group consisting of hydrogen, or a substituent selected from the group consisting of C<sub>1</sub>-C<sub>3</sub>-alkyl, C<sub>1</sub>-C<sub>3</sub>-alkanoyl, C<sub>1</sub>-C<sub>7</sub>-alkoxycarbonyl, C<sub>7</sub>-C<sub>10</sub>-arylmethoxycarbonyl, C<sub>7</sub>-C<sub>10</sub>-aroyl, C<sub>7</sub>-C<sub>10</sub>-arylalkyl, C<sub>3</sub>-C<sub>7</sub>-alkylsilyl and C<sub>5</sub>-C<sub>10</sub>-alkylsilylalkoxyalkyl;

~~Y and Z are each independently from each other mean one or more identical or different substituents linked to any available carbon atom~~ selected from the group consisting of hydrogen, halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>2</sub>-C<sub>4</sub>-alkenyl, C<sub>2</sub>-C<sub>4</sub>-alkynyl alkynyl, halo-C<sub>1</sub>-C<sub>4</sub>-alkyl, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, trifluoromethoxy, C<sub>1</sub>-C<sub>4</sub>-alkanoyl, amino, amino-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkylamino, N-(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl, carboxy, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl, cyano and nitro;

R<sup>1</sup> means is selected from the group consisting of hydrogen, halogen, optionally substituted C<sub>1</sub>-C<sub>7</sub>-alkyl optionally substituted with one, two, three or more substituents selected from the group consisting of halogen atom, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl and C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl; C<sub>2</sub>-C<sub>7</sub>-alkenyl optionally substituted with one, two, three or more halogen atoms; C<sub>2</sub>-C<sub>7</sub>-alkynyl alkynyl; monocyclic or bicyclic aryl group having from 6 to 10 carbon atoms and altering double bond and said group can be optionally substituted with one or two substituents selected from the group consisting of fluoro, chloro, C<sub>1</sub>-C<sub>4</sub>-alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub>

alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, amino, *N*-(C<sub>1</sub>-C<sub>4</sub>)-alkylamino, *N,N*-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl and can be linked to the rest of the molecule by any available carbon atom via direct bond or via C<sub>1</sub>-C<sub>4</sub>-alkylene group; monocyclic or bicyclic heteroaryl having the meaning of aromatic and partially aromatic groups of a monocyclic or bicyclic ring with 4 to 12 carbon atoms and at least one of them being heteroatom selected from the group consisting of O, S and N wherein available carbon or nitrogen represent the binding site of the group to the rest of the molecule either via direct bond or via C<sub>1</sub>-C<sub>4</sub>-alkylene group and where said heteroaryl can be optionally substituted with fluoro, chloro, C<sub>1</sub>-C<sub>4</sub>-alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, amino, *N*-(C<sub>1</sub>-C<sub>4</sub>)-alkylamino, *N,N*-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl; five member or six member fully saturated or partly unsaturated heterocycle group containing at least one hetero atom selected from the group consisting of O, S and N wherein available carbon or nitrogen represent the binding site of the group to the rest of the molecule either via direct bond or via C<sub>1</sub>-C<sub>4</sub>-alkylene group and where said heterocycle can be optionally substituted with fluoro, chloro, C<sub>1</sub>-C<sub>4</sub>-alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, amino, *N*-(C<sub>1</sub>-C<sub>4</sub>)-alkylamino, *N,N*-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl; hydroxy; hydroxy-C<sub>2</sub>-C<sub>7</sub>-alkenyl; hydroxy-C<sub>2</sub>-C<sub>7</sub>-alkynyl alkynyl; C<sub>1</sub>-C<sub>7</sub>-alkoxy; thiol; thio-C<sub>2</sub>-C<sub>7</sub>-alkenyl; thio-C<sub>2</sub>-C<sub>7</sub>-alkynyl alkynyl; C<sub>1</sub>-C<sub>7</sub>-alkylthio; amino; *N*-(C<sub>1</sub>-C<sub>7</sub>-alkyl)amino; *N,N*-di(C<sub>1</sub>-C<sub>7</sub>-alkyl)amino; C<sub>1</sub>-C<sub>7</sub>-alkylamino; amino-C<sub>2</sub>-C<sub>7</sub>-alkenyl; amino-C<sub>2</sub>-C<sub>7</sub>-alkynyl alkynyl; amino-C<sub>1</sub>-C<sub>7</sub>-alkoxy; C<sub>1</sub>-C<sub>7</sub>-alkanoyl; C<sub>7</sub>-C<sub>10</sub>-aroyl; oxo-C<sub>1</sub>-C<sub>7</sub>-alkyl; C<sub>1</sub>-C<sub>7</sub>-alkanoyloxy; carboxy; an optionally substituted C<sub>1</sub>-C<sub>7</sub>-alkyloxycarbonyl; an optionally substituted C<sub>7</sub>-C<sub>10</sub>-aryloxycarbonyl; carbamoyl; *N*-(C<sub>1</sub>-C<sub>7</sub>-alkyl)carbamoyl; *N,N*-di(C<sub>1</sub>-C<sub>7</sub>-alkyl)carbamoyl; cyano; cyano-C<sub>1</sub>-C<sub>7</sub>-alkyl; sulfonyl; C<sub>1</sub>-C<sub>7</sub>-alkylsulfonyl; sulfinyl; C<sub>1</sub>-C<sub>7</sub>-alkylsulfinyl; nitro;

or a substituent represented with of the formula **II**:



**II**

wherein

~~R<sup>2</sup> and R<sup>3</sup> simultaneously or are each independently from each other have the meaning of hydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or aryl have the meaning as~~ as defined above or,

~~R<sup>2</sup> and R<sup>3</sup> taken together with the nitrogen atom to which they are attached form an N have the meaning of optionally substituted heterocycle or heteroaryl wherein heterocycle relates to five member or six member fully saturated or partly unsaturated heterocycle group containing at least one hetero atom selected from the group consisting of O, S and N and where said heterocycle which can be optionally substituted with one or two substituents which are selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl, and C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl and heteroaryl relates to aromatic and partially aromatic groups of a monocyclic or bicyclic ring with 4 to 12 carbon atoms and at least one of them being heteroatom selected from the group consisting of O, S and N and where said heteroaryl can be optionally substituted with one or two substituents which are selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl; or~~

a monocyclic or bicyclic aryl group; a monocyclic or bicyclic heteroaryl group; and a heterocycle, wherein the monocyclic or bicyclic aryl group, the monocyclic or bicyclic heteroaryl group and the heterocycle are linked to the thiophene ring via a direct bond or a C1-C4 alkylene group, and are each optionally substituted with one or more substituents selected from the group consisting of fluoro, chloro, C1-C4 alkyl, cyano, nitro, hydroxy, C1-C4 alkoxy, thiol, C1-C4 alkylthio, amino, N-(C 1-C4) alkylamino, N,N-di(C1-C4-alkyl)-amino, sulfonyl, C1-C4 alkylsulfonyl, sulfinyl and C1-C4 alkylsulfinyl;

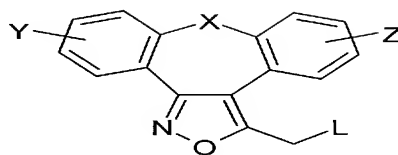
~~m has the meaning of is~~ an integer from 1 to 3;

~~Q has the meaning of is~~ oxygen, sulfur or nitrogen;

and its pharmacologically acceptable salts and solvates,

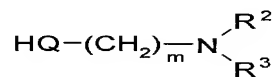
which comprises:

- a) ~~condensation of~~condensing a compound Ia:



**Ia**

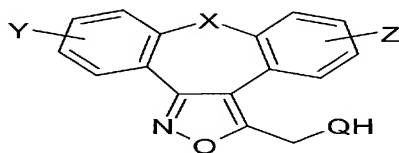
wherein symbols X, Y and Z have the meaning are as defined above, L have the meaning is a leaving group, with an optionally selected alcohol, thioalcohol or amine or with a compound of the formula **IIa**:



**IIa**

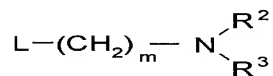
wherein all radicals and symbols have earlier stated meanings;

b) ~~condensation of~~ condensing a compound of the formula **Ib**:



**Ib**

wherein all symbols have the earlier stated meanings, with a compound of the formula **IIb**:



**IIb**

wherein the radicals  $R^2$  and  $R^3$  and the symbol m have the earlier stated meanings and symbol L ~~has the meaning of~~ is a suitable leaving group.

10. (Currently Amended) A pharmaceutical composition comprising at least one compound according to claim 1 ~~and~~ or a pharmaceutically acceptable salt or solvate thereof ~~in association with~~ and a pharmaceutically acceptable excipient diluent and/or carrier.

11. (Currently Amended) ~~Use of a compound according to claim 1 for the manufacture of a pharmaceutical formulations for the treatment and prevention of diseases, damages and disorders~~ A method of treating or preventing a disease, damage, or disorder of the central nervous system caused by disorders associated with a disorder of neurochemical equilibrium of biogenic amines or other neurotransmitters comprising administering the dibenzoazulene of claim 1.

12. (Currently Amended) ~~Use according to~~ The method of claim 11, wherein the selected biogenic amine is ~~amines are~~ serotonin, norepinephrine ~~and~~ or dopamine.

13. (Currently Amended) ~~Use according to~~ The method of claim 11, wherein the neurotransmitter is glutamate.

14. (Currently Amended) ~~Use according to claims 11, 12 or 13~~ The method of claim 11 wherein the dibenzoazulene ~~compounds of the general formula I act upon the neurochemical equilibrium by regulating~~ regulates the synthesis, storing, releasing, metabolizing storage, release, metabolism and/or reabsorption, or receptor binding of said biogenic amines amine or neurotransmitters neurotransmitter ~~and binding to their receptors.~~

15. (Currently Amended) ~~Use according to~~ The method of claim 14, wherein the dibenzoazulene ~~compounds of the general formula I show binding affinity~~ binds to a receptor of one ~~or more~~ a biogenic amines amine.

16. (Currently Amended) ~~Use according to~~ The method of claim 15, wherein the dibenzoazulene ~~compounds of the general formula I show a significant binding affinity~~ binds to a serotonin 5-HT<sub>2A</sub> ~~and~~ or 5-HT<sub>2C</sub> ~~receptors~~ receptor.

17. (Currently Amended) ~~Use according to~~ The method of claim 16, wherein ~~dibenzoazulene compounds of the general formula I show binding affinity to selected~~ binds to a serotonin 5-HT<sub>2A</sub> or 5-HT<sub>2C</sub> receptors receptor with an in a concentration of IC<sub>50</sub><1 μM of less than 1 μM.

18. (Currently Amended) ~~Use according to~~ The method of claim 11, wherein the ~~dibenzoazulene compounds of the general formula I as~~ binds to a σ<sub>1</sub> receptor ligands in a concentration of with an IC<sub>50</sub><1 μM of less than 1 μM by modulating central neurotransmitter system.

19. (Currently Amended) ~~Use according to claims 11, 16 or 18,~~ The method of claim 11, wherein the ~~dibenzoazulene compounds of the general formula I show dual binding affinity bind~~ to a σ<sub>1</sub> receptor and to at least one serotonin receptor selected from 5-HT<sub>2A</sub> and 5-HT<sub>2C</sub>.

20. (Currently Amended) ~~Use according to~~ The method of claim 11, wherein the ~~diseases and disorders~~ disease or disorder of the central nervous system ~~are is~~ is selected from the group consisting of anxiety, depression ~~and modest depression~~, bipolar disorders, sleeping disorders, sexual disorders, psychosis, borderline psychosis, schizophrenia, migraine, personality disorders and obsessive-compulsive disorders, social phobia or panic attacks, organic mental disorders in children, aggression, memory disorders and personality disorders in elderly people, addiction, obesity, bulimia and ~~similar other eating disorders~~, snoring, and premenstrual troubles.

21. (Currently Amended) ~~Use according to~~ The method of claim 11, wherein the ~~damages of damage to~~ the central nervous system ~~are is~~ is caused by trauma, brain stroke, neurodegenerative diseases, cardiovascular disorders ~~such as high blood pressure, thrombosis, infarct as well as by or~~ gastrointestinal disorders.

22. (Currently Amended) ~~Use according to~~ The method of claim 11, wherein the ~~dibenzoazulene is compounds of the general formula I, pharmaceutically acceptable salts and solvates thereof are~~ selected from the group consisting of:

3-methyl-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;

11-chloro-3-methyl-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;  
3-methyl-2,8-dioxa-1-aza-dibenzo[*e,h*]azulene;  
3-bromomethyl-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;  
3-bromomethyl-11-chloro-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulene;  
3-bromomethyl-2,8-dioxa-1-aza-dibenzo[*e,h*]azulene;  
dimethyl-[2-(2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-ethyl]-amine;  
dimethyl-[3-(2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-propyl]-amine;  
dimethyl-[2-(11-chloro-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-ethyl]-  
amine;  
dimethyl-[3-(11-chloro-2-oxa-8-thia-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-  
propyl]-amine;  
dimethyl-[2-(2,8-dioxa-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-ethyl]-amine; and  
dimethyl-[3-(2,8-dioxa-1-aza-dibenzo[*e,h*]azulen-3-ylmethoxy)-propyl]-amine; or  
pharmaceutically acceptable salts and solvates thereof.